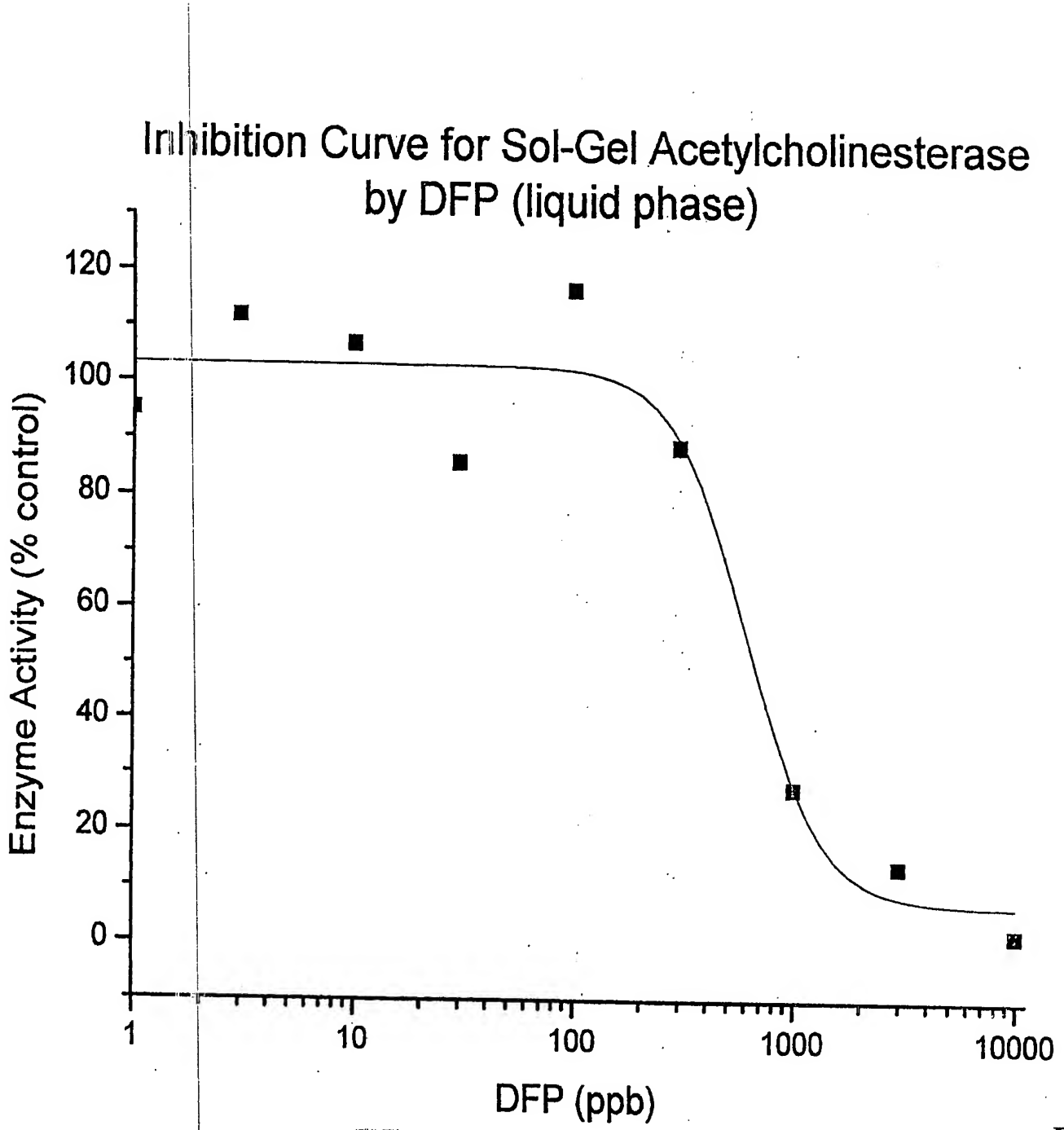

Inhibition Curve for Sol-Gel Acetylcholinesterase
by DFP (liquid phase)
Enzyme Activity (% control)
120
100
80
60
40
20
0
1
10
100
1000
10000
DFP (ppb)

FIGURE 1

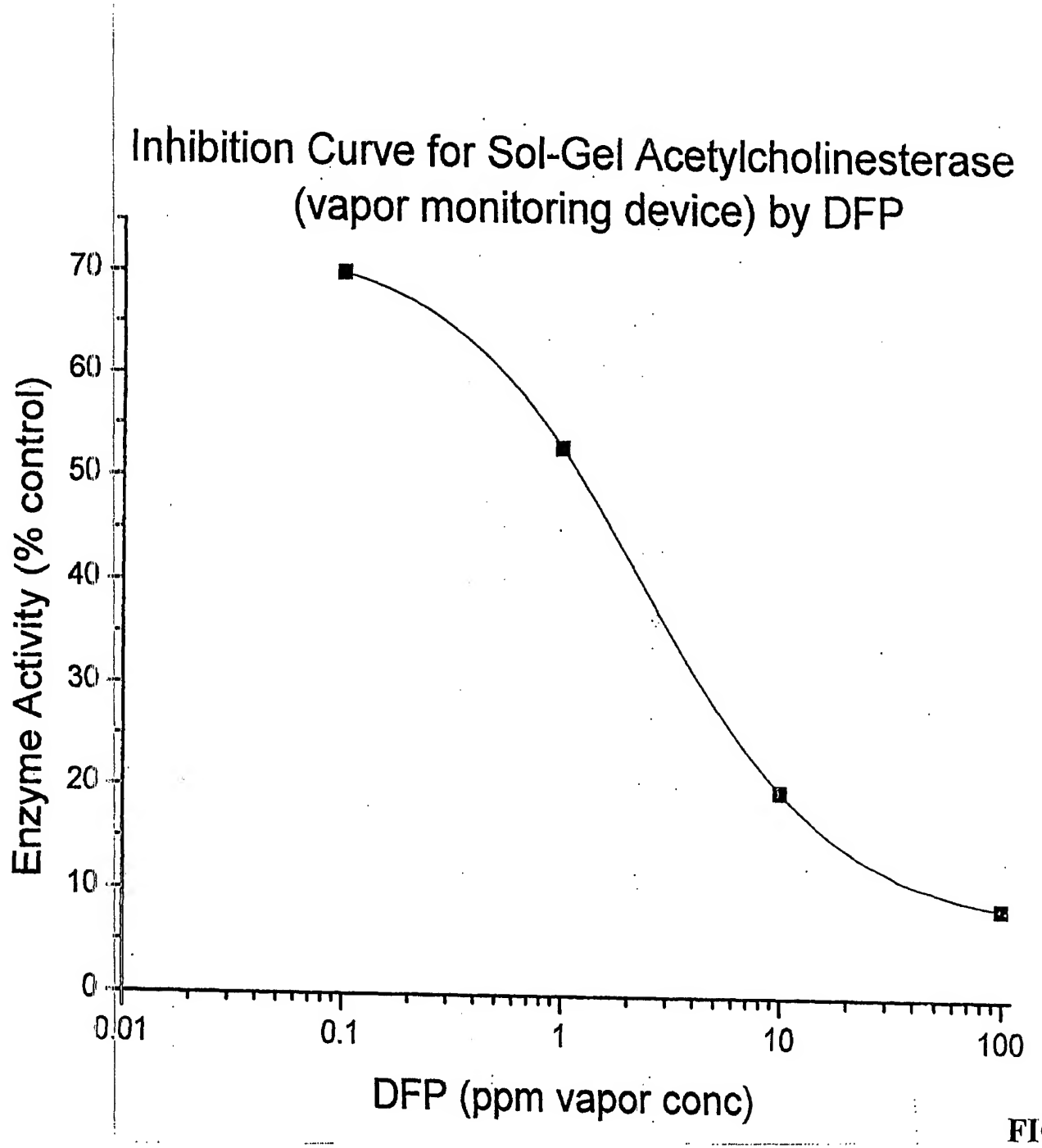

Inhibition Curve for Sol-Gel Acetylcholinesterase
(vapor monitoring device) by DFP
Enzyme Activity (% control)
70
60
50
40
30
20
10
0
0.01
0.1
1
10
100
DFP (ppm vapor conc)

FIGURE 2

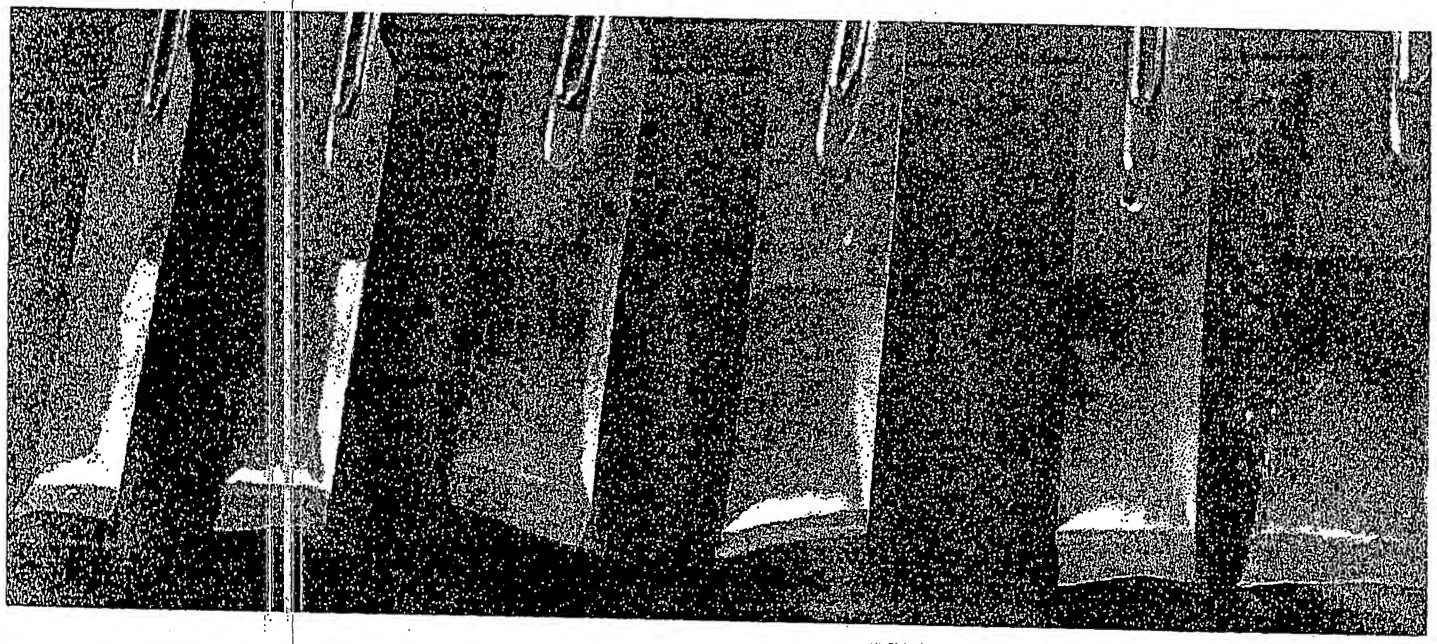


FIGURE 3

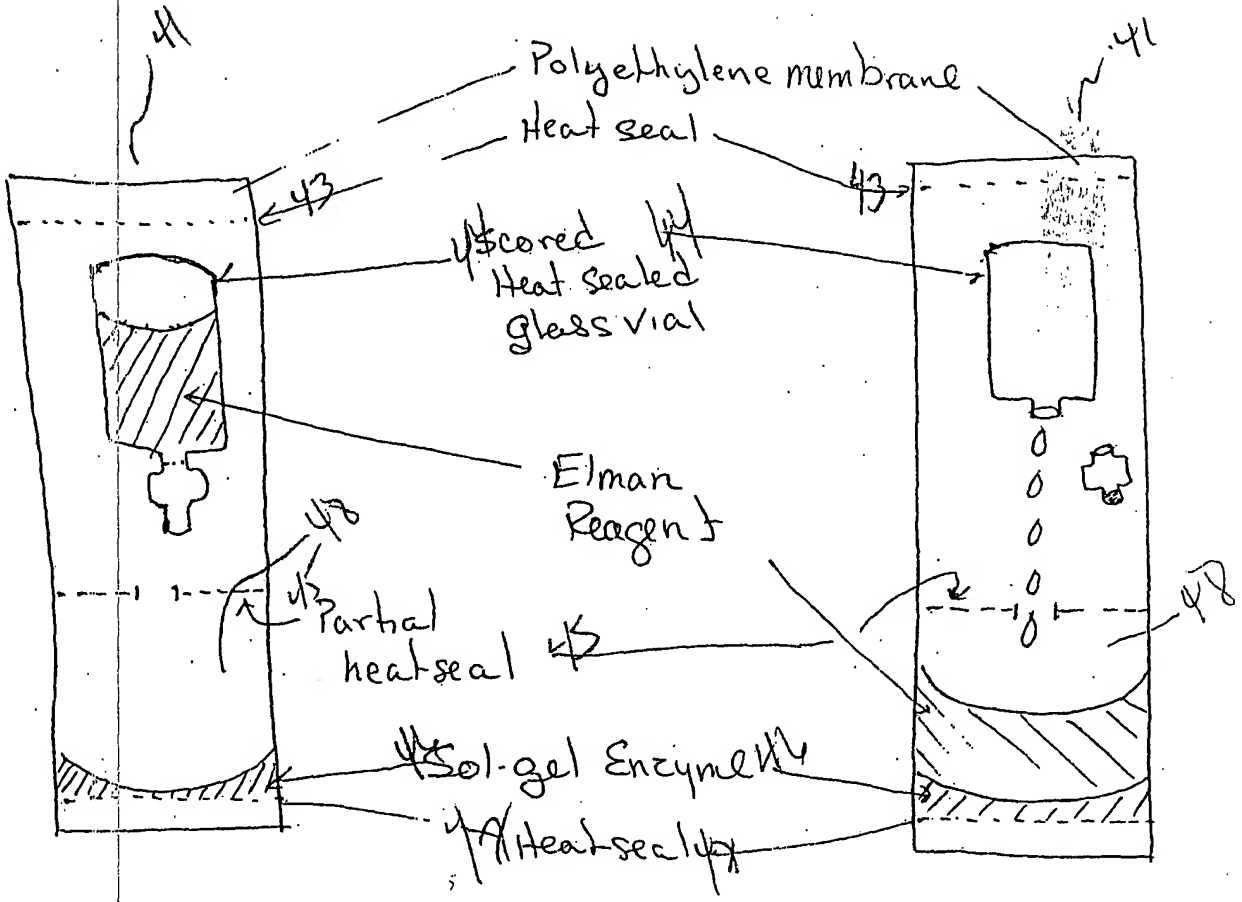

41
Polyethylene membrane
Heat seal
41
43
43
Scored
Heat sealed
glass vial
Elman
Reagent
40
43
Partial
heat seal
43
48
Sol-gel Enzyme
Heat seal

FIGURE 4

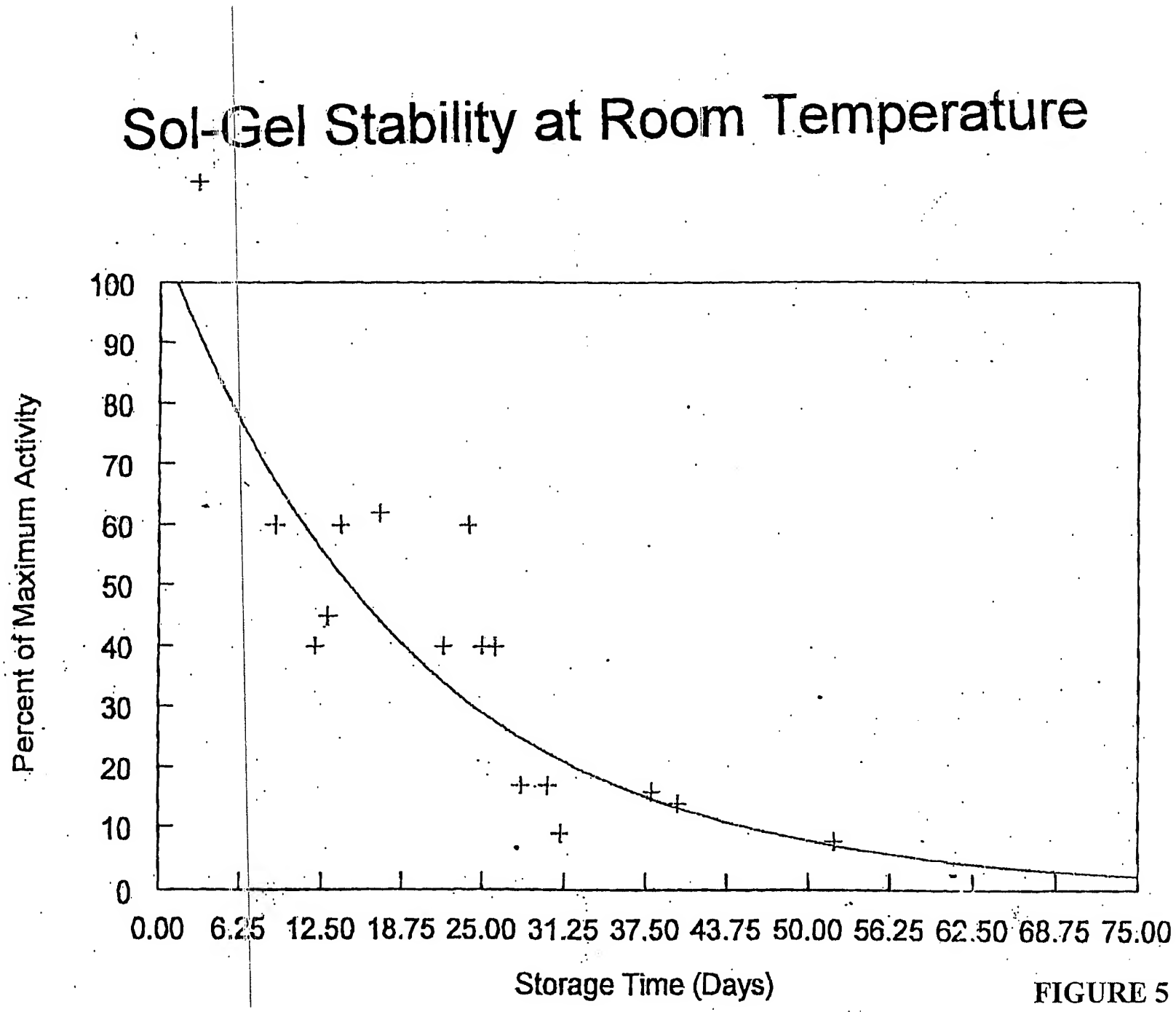

Sol-Gel Stability at Room Temperature
Percent of Maximum Activity
100
90
80
70
60
50
40
30
20
10
0
0.00
6.25
12.50
18.75
25.00
31.25
37.50
43.75
50.00
56.25
62.50
68.75
75.00
Storage Time (Days)

FIGURE 5

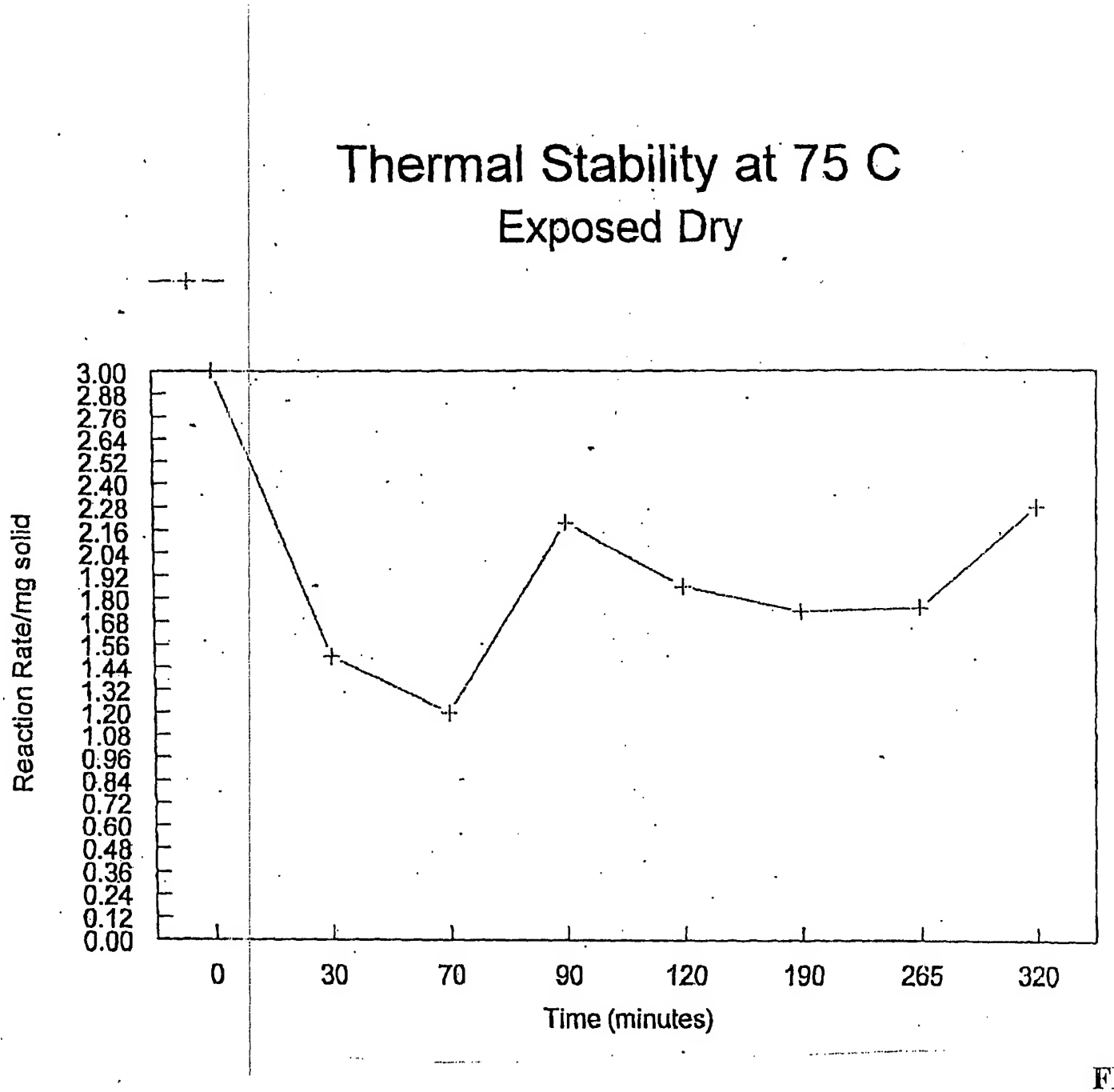

Thermal Stability at 75 C
Exposed Dry
Reaction Rate/mg solid
3.00
2.88
2.76
2.64
2.52
2.40
2.28
2.16
2.04
1.92
1.80
1.68
1.56
1.44
1.32
1.20
1.08
0.96
0.84
0.72
0.60
0.48
0.36
0.24
0.12
0.00
0
30
70
90
120
190
265
320
Time (minutes)

FIGURE 6

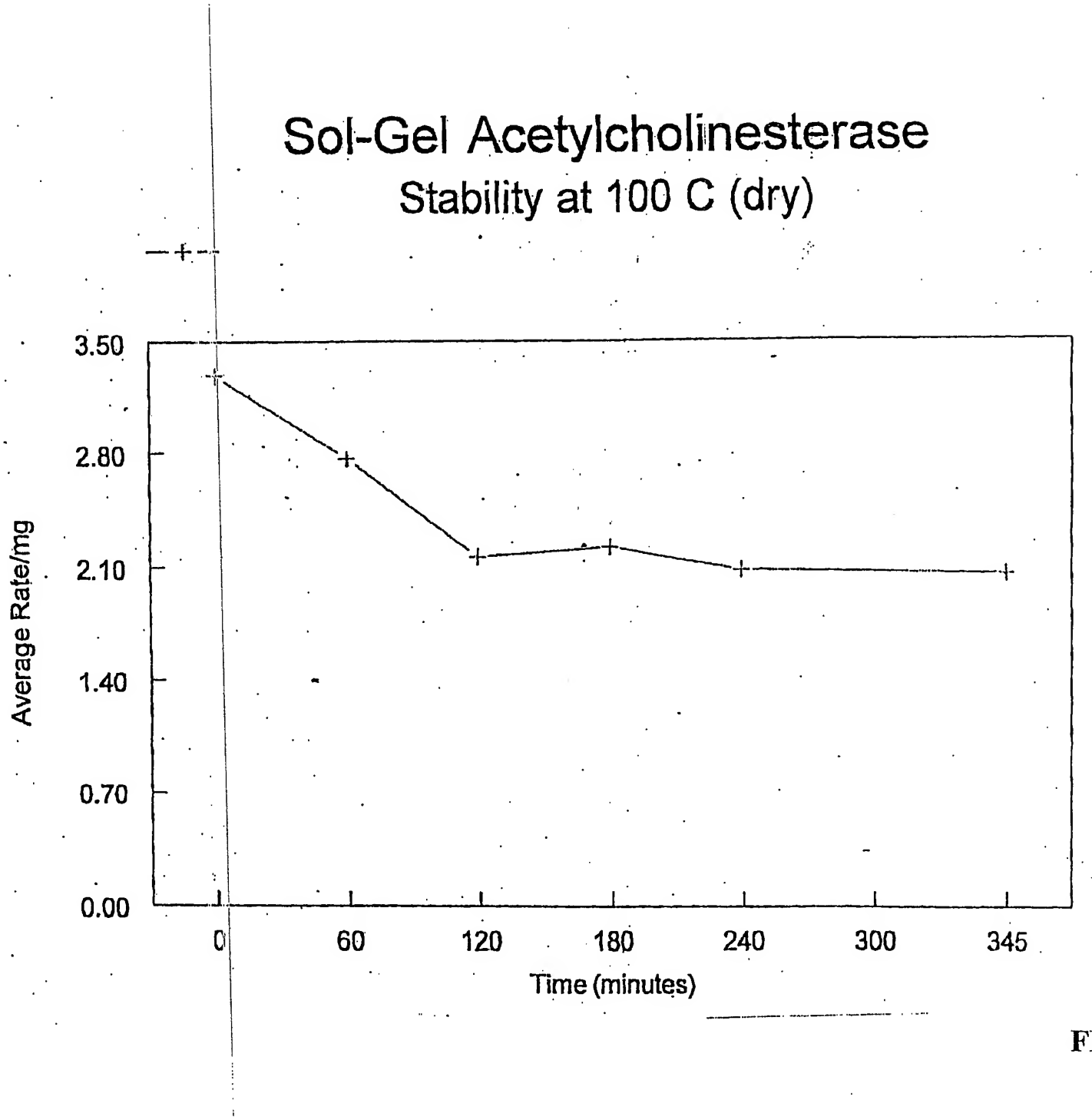

Sol-Gel Acetylcholinesterase
Stability at 100 C (dry)
Average Rate/mg
3.50
2.80
2.10
1.40
0.70
0.00
0
60
120
180
240
300
345
Time (minutes)

FIGURE 7

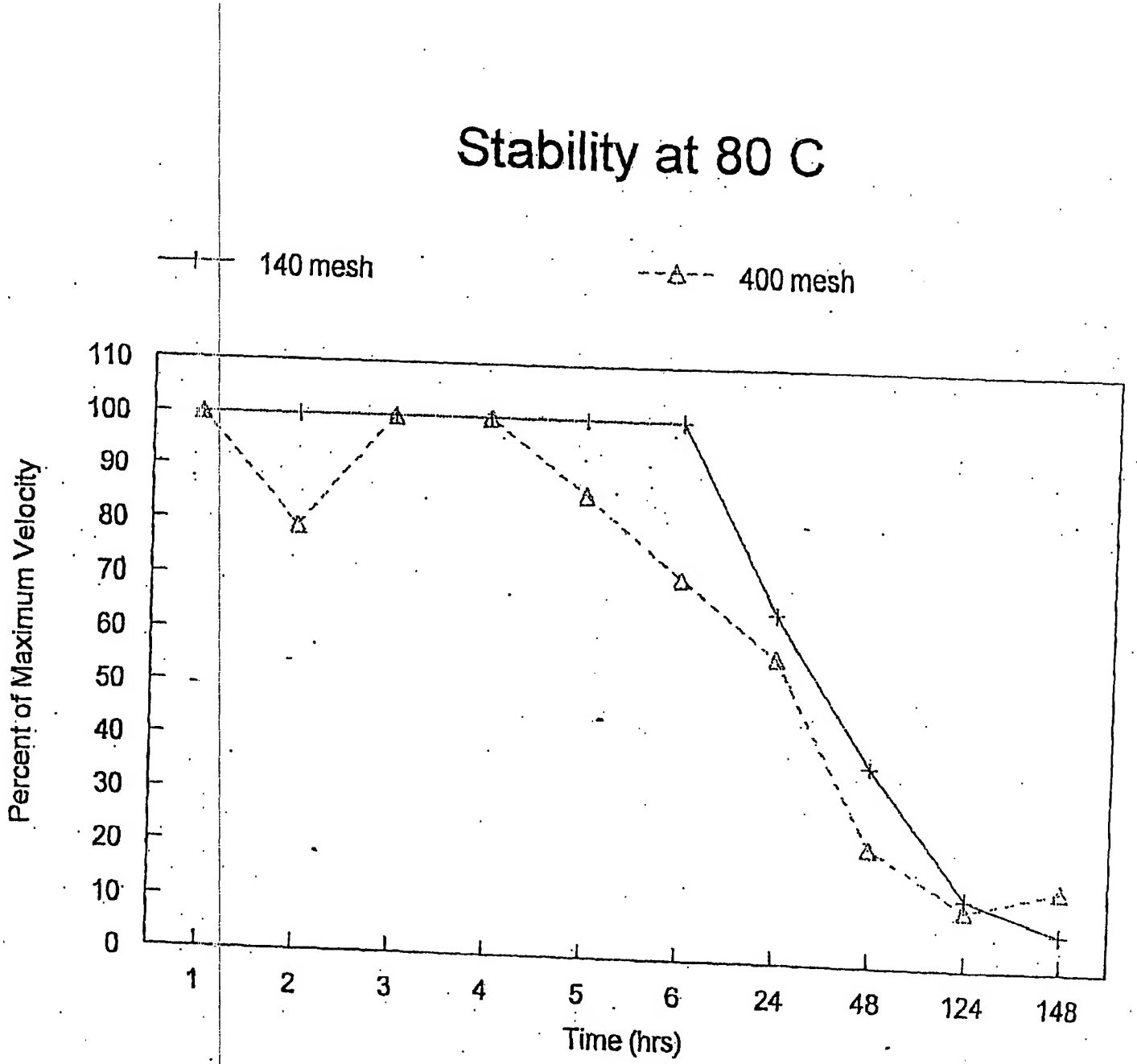

Stability at 80 C
140 mesh
400 mesh
Percent of Maximum Velocity
110
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
24
48
124
148
Time (hrs)

FIGURE 8

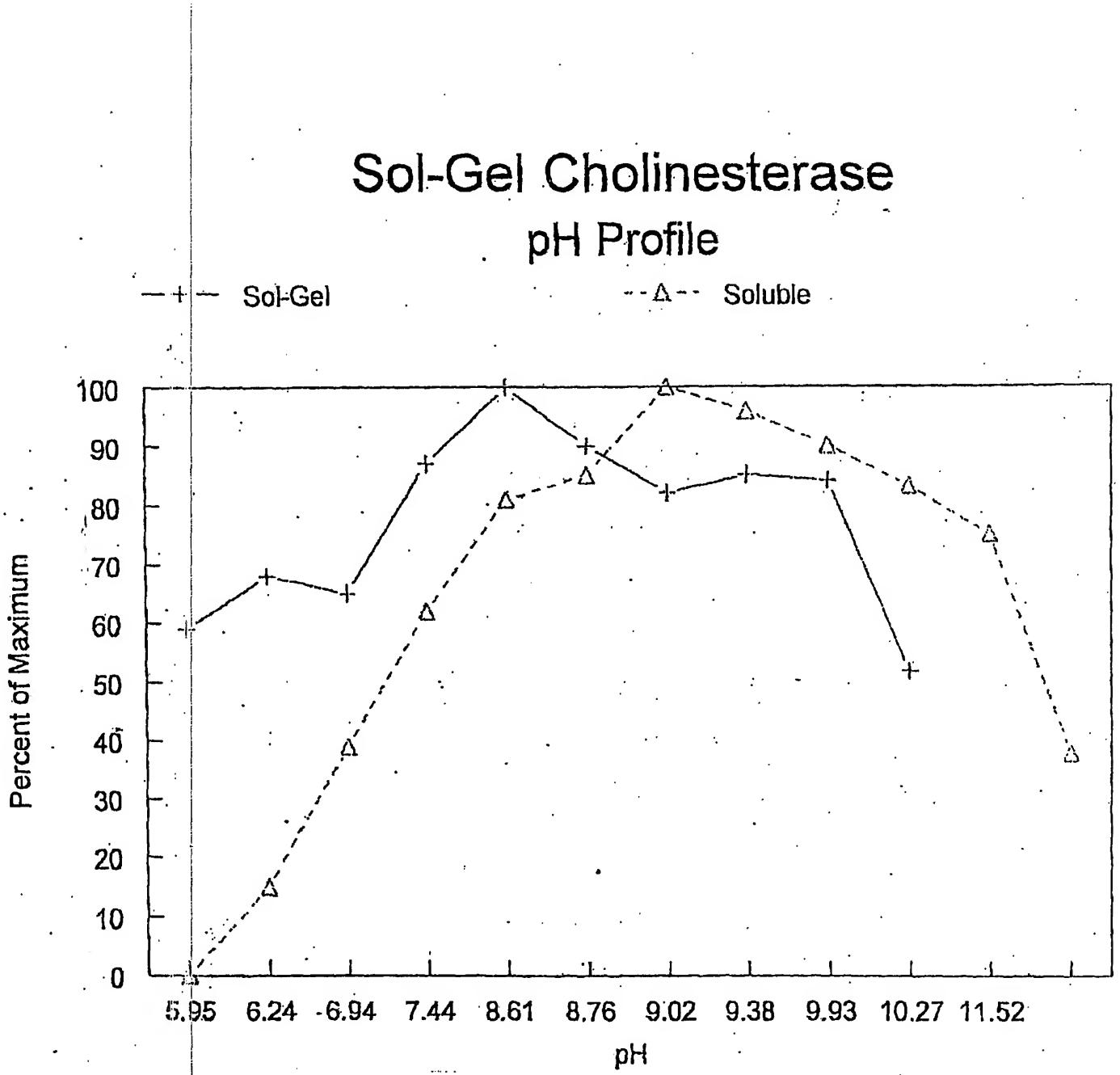

Sol-Gel Cholinesterase
pH Profile
Sol-Gel
Soluble
Percent of Maximum
100
90
80
70
60
50
40
30
20
10
0
5.95
6.24
6.94
7.44
8.61
8.76
9.02
9.38
9.93
10.27
11.52
pH

FIGURE 9

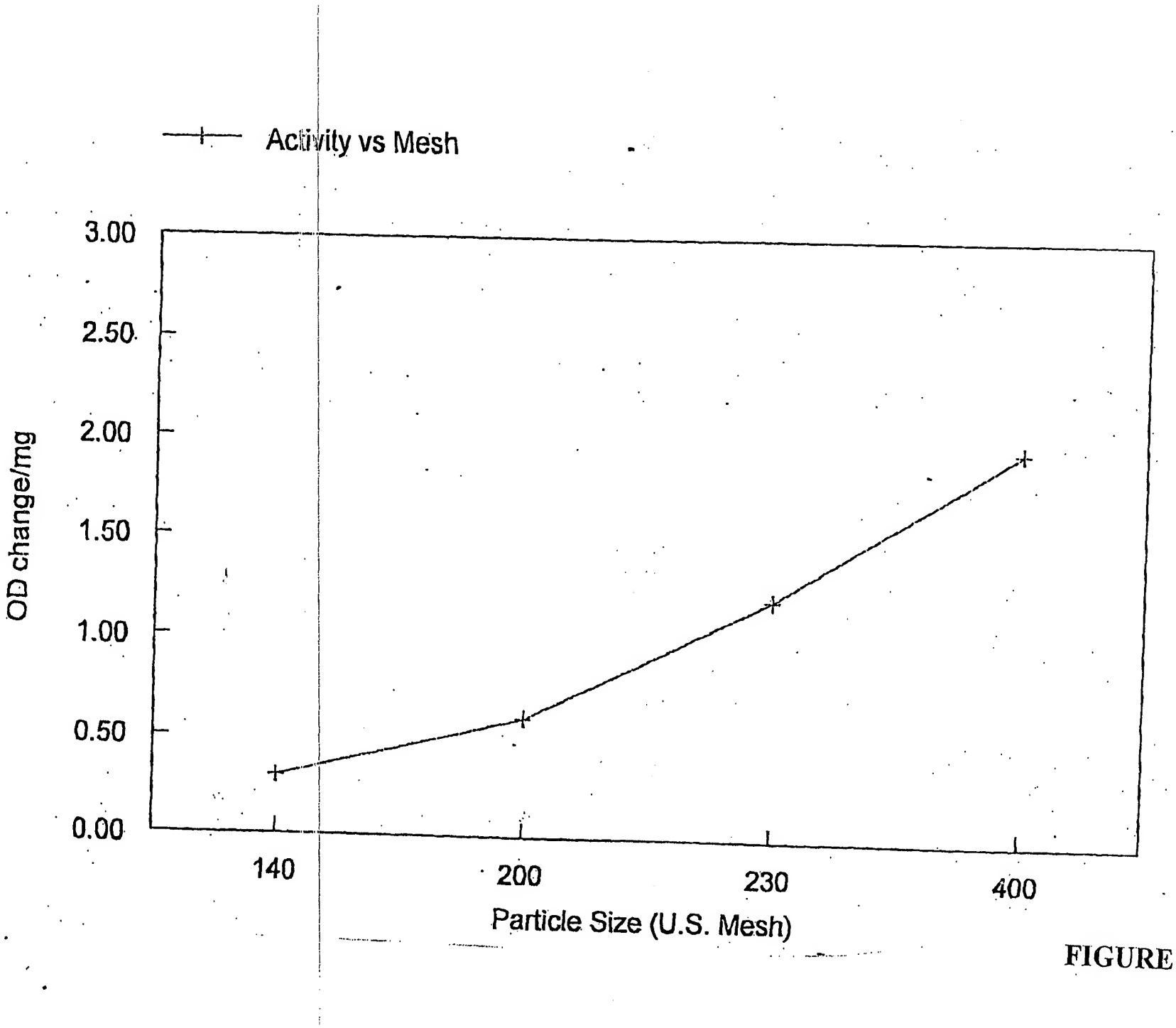

Activity vs Mesh
3.00
2.50
2.00
1.50
1.00
0.50
0.00
OD change/mg
140
200
230
400
Particle Size (U.S. Mesh)

FIGURE 10

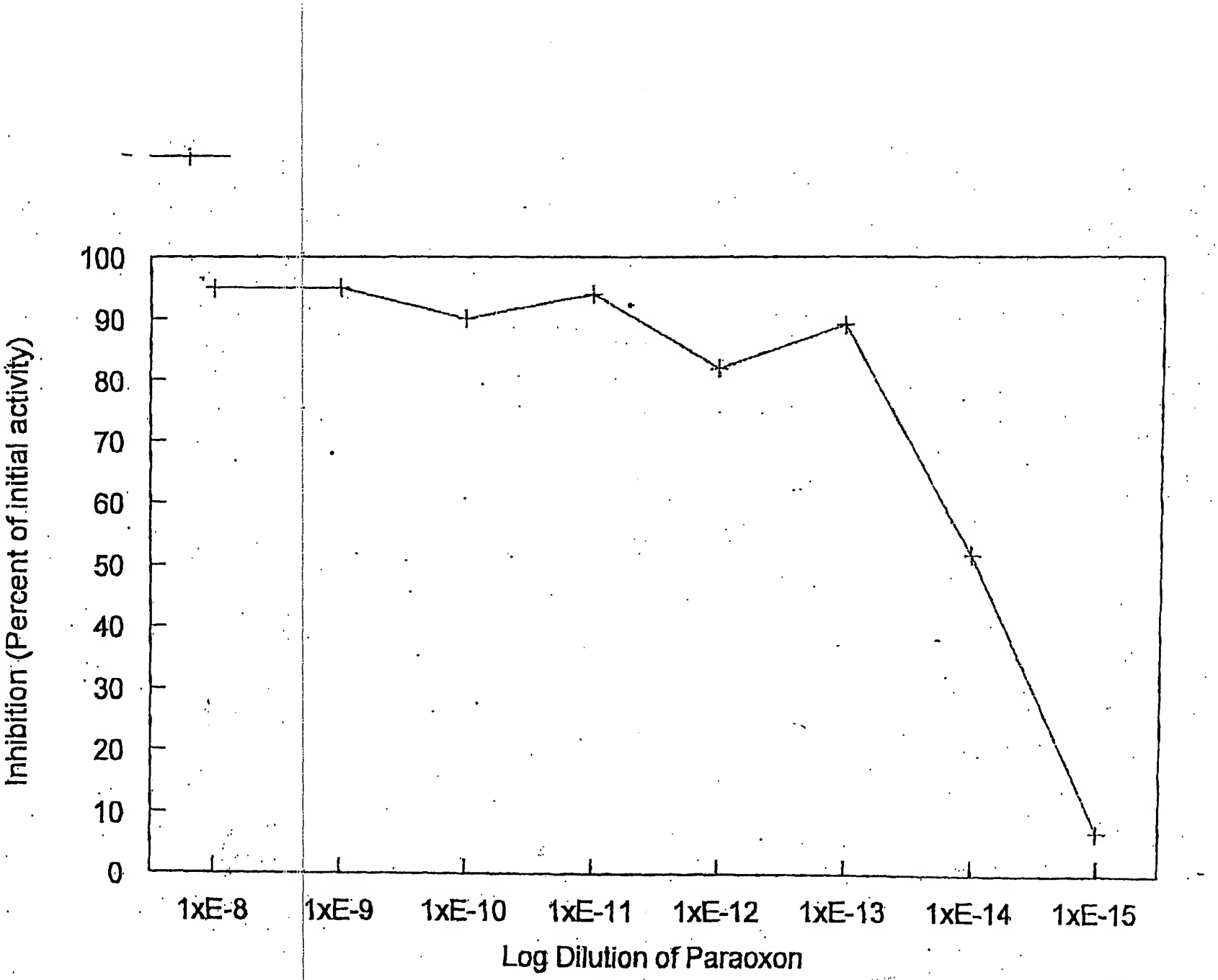
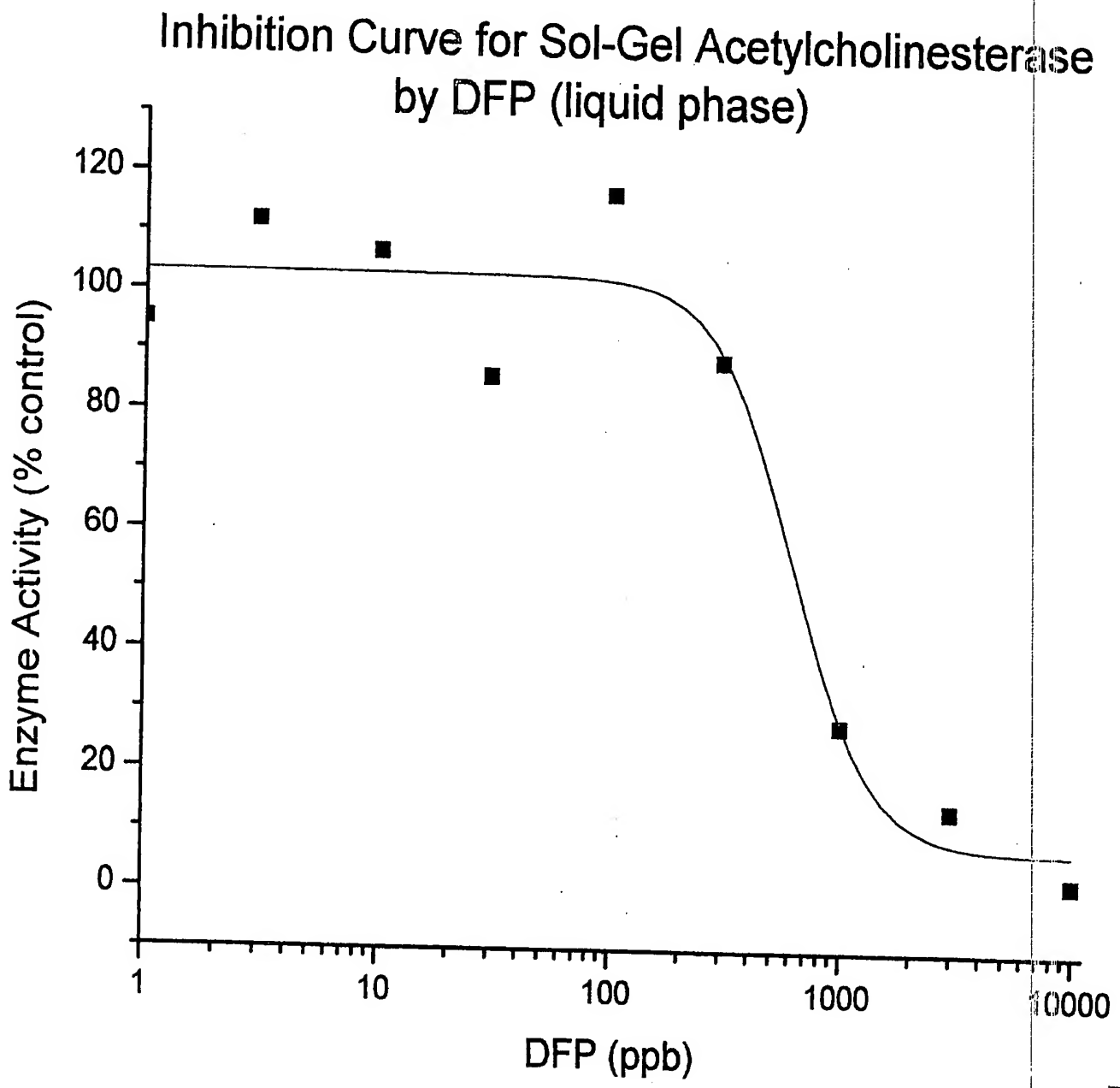

Inhibition (Percent of initial activity)
100
90
80
70
60
50
40
30
20
10
0
1xE-8
1xE-9
1xE-10
1xE-11
1xE-12
1xE-13
1xE-14
1xE-15
Log Dilution of Paraoxon

FIGURE 11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Enzyme Activity (% control)
120
100
80
60
40
20
0
1
10
100
1000
10000
DFP (ppb)

FIGURE 1

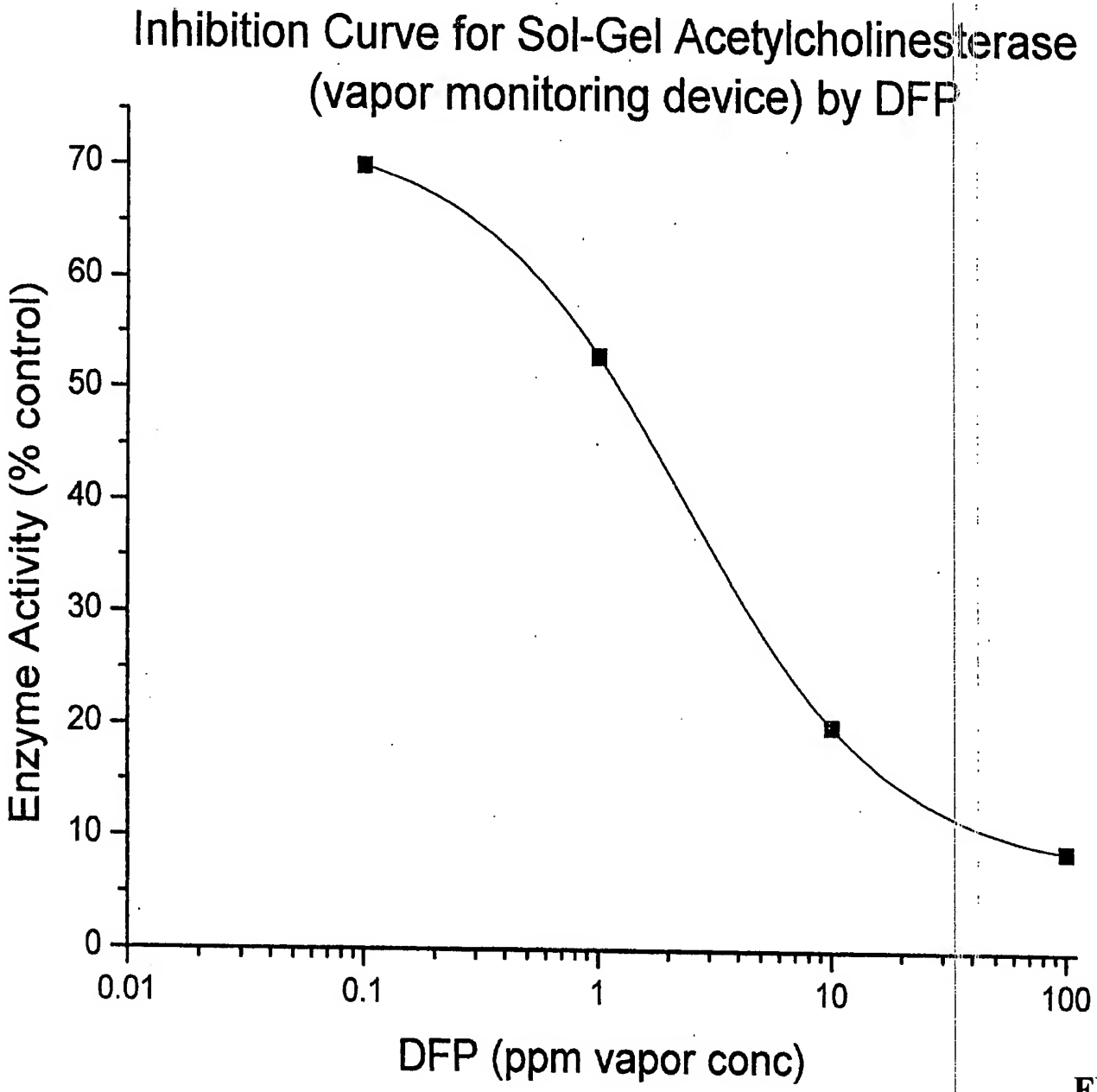

Inhibition Curve for Sol-Gel Acetylcholinesterase
(vapor monitoring device) by DFP
Enzyme Activity (% control)
70
60
50
40
30
20
10
0
0.01
0.1
1
10
100
DFP (ppm vapor conc)

FIGURE 2

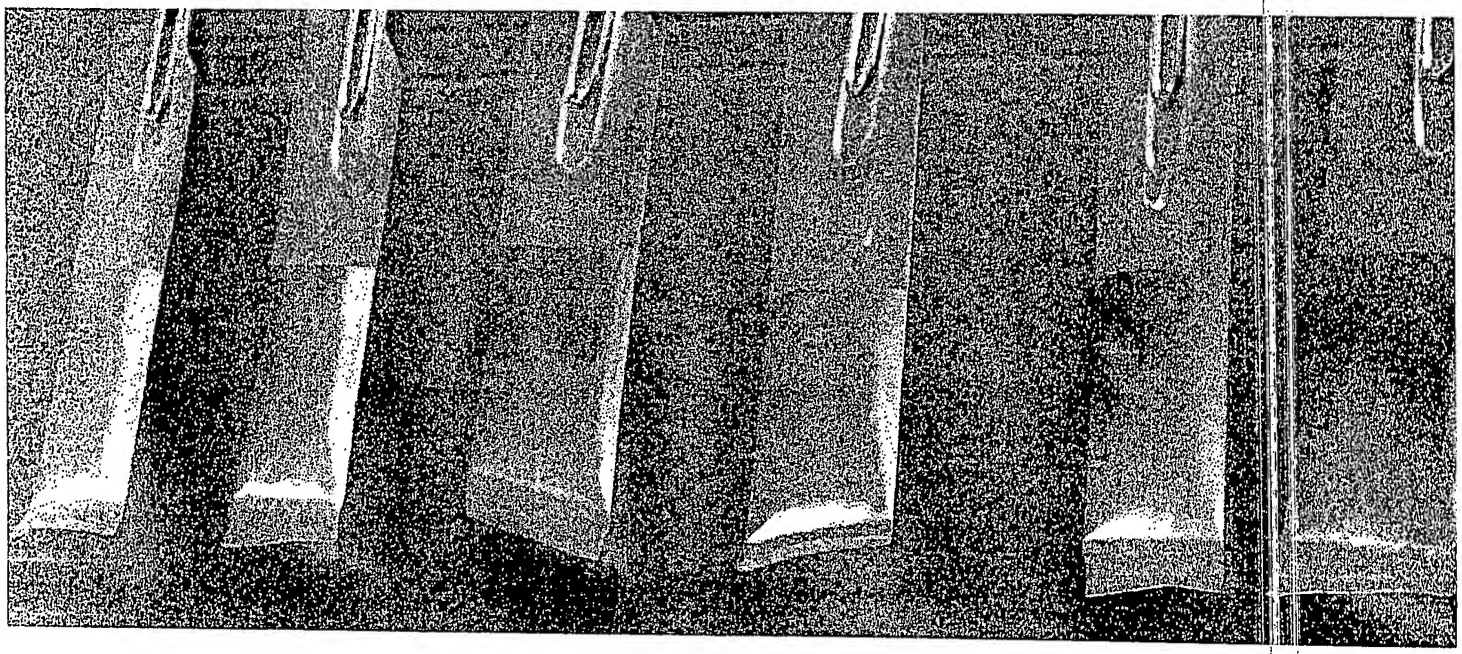


FIGURE 3

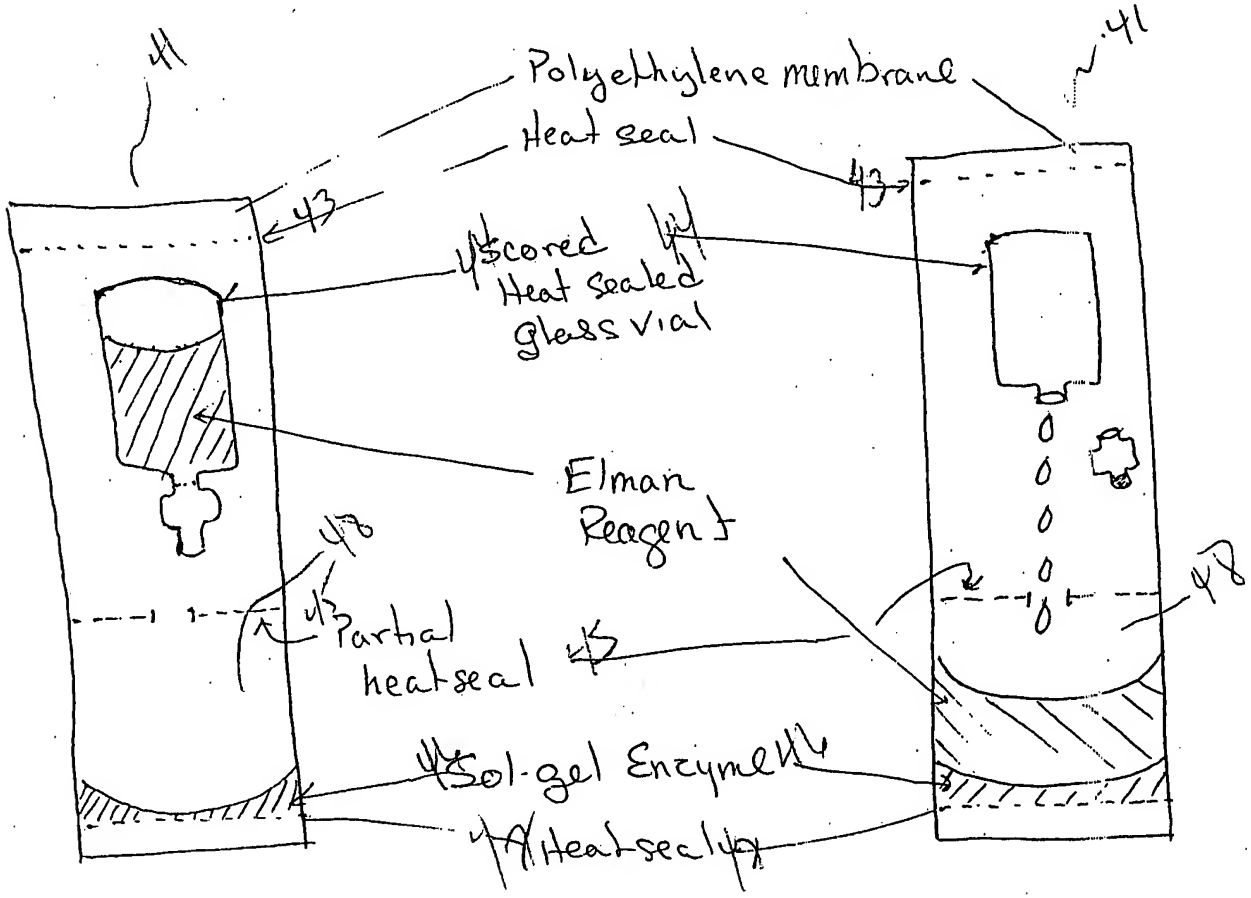

41
Polyethylene membrane
Heat seal
41
43
Scored
Heat sealed
glass vial
Elman
Reagent
48
43
Partial
heat seal
Sol-gel Enzyme
Heat seal

FIGURE 4

Sol-Gel Stability at Room Temperature

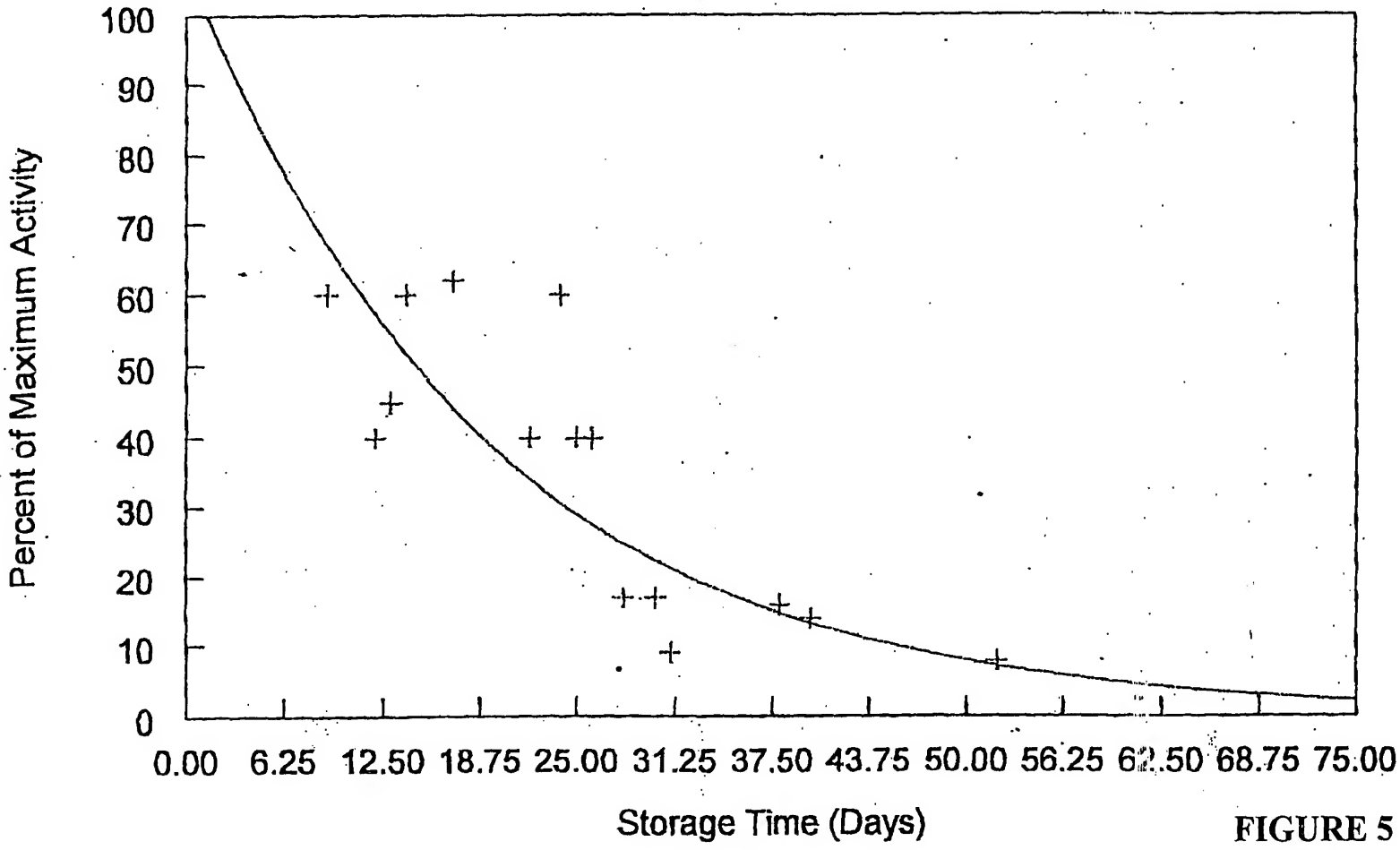
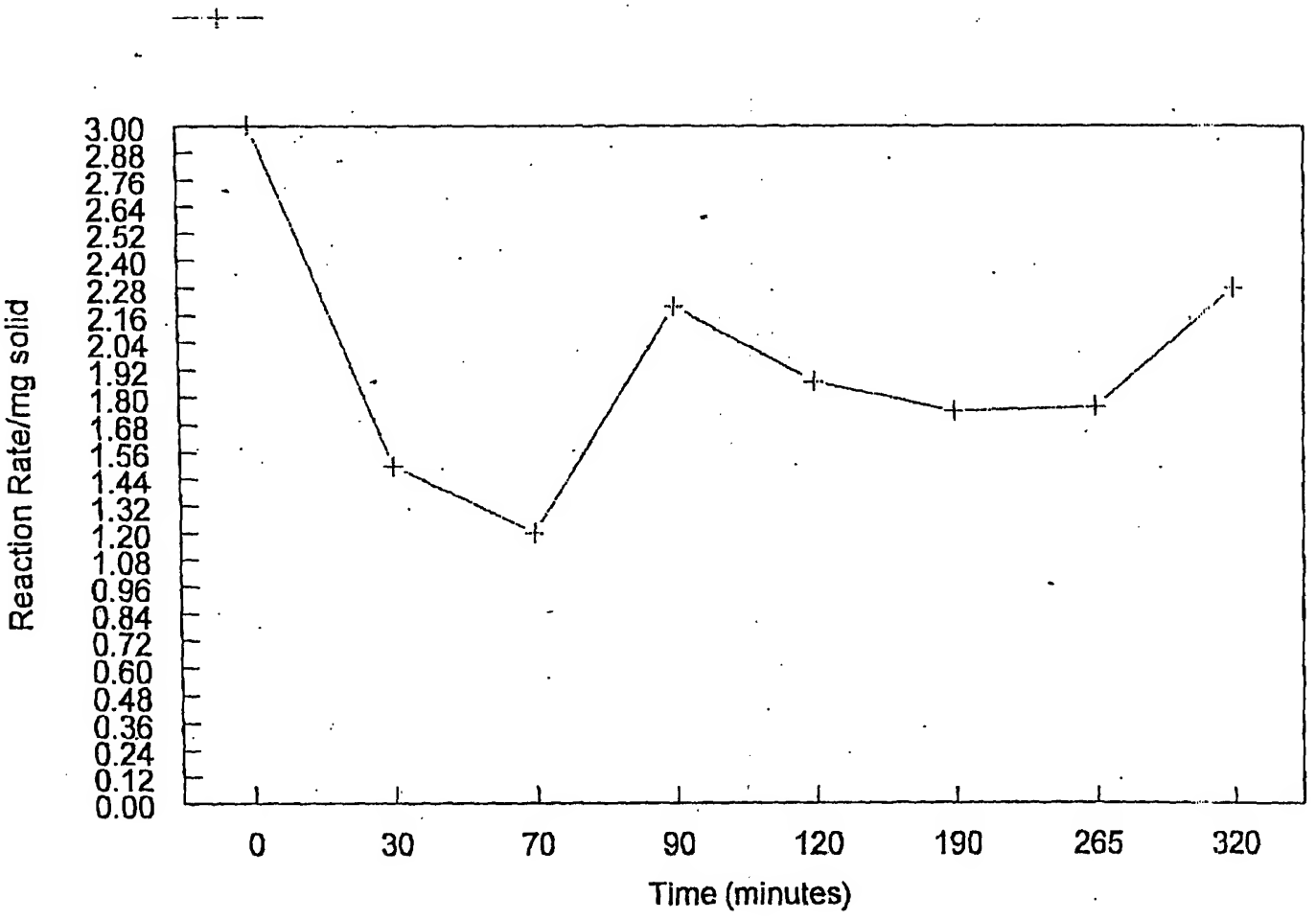


FIGURE 5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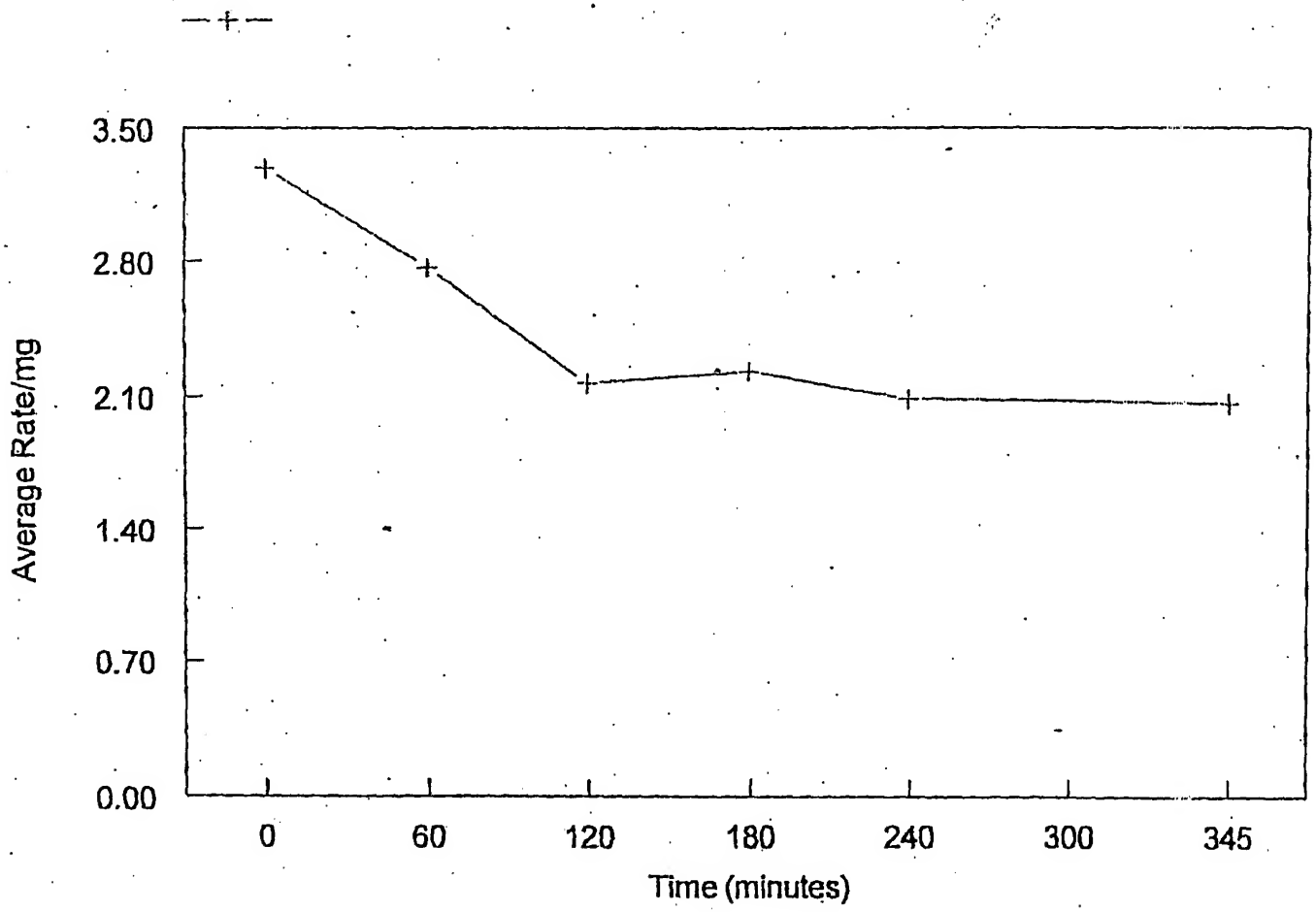
1.80
1.68
1.56
1.44
1.32
1.20
1.08
0.96
0.84
0.72
0.60
0.48
0.36
0.24
0.12
0.00
0
30
70
90
120
190
265
320
Time (minutes)

FIGURE 6


Sol-Gel Acetylcholinesterase
Stability at 100 C (dry)
3.50
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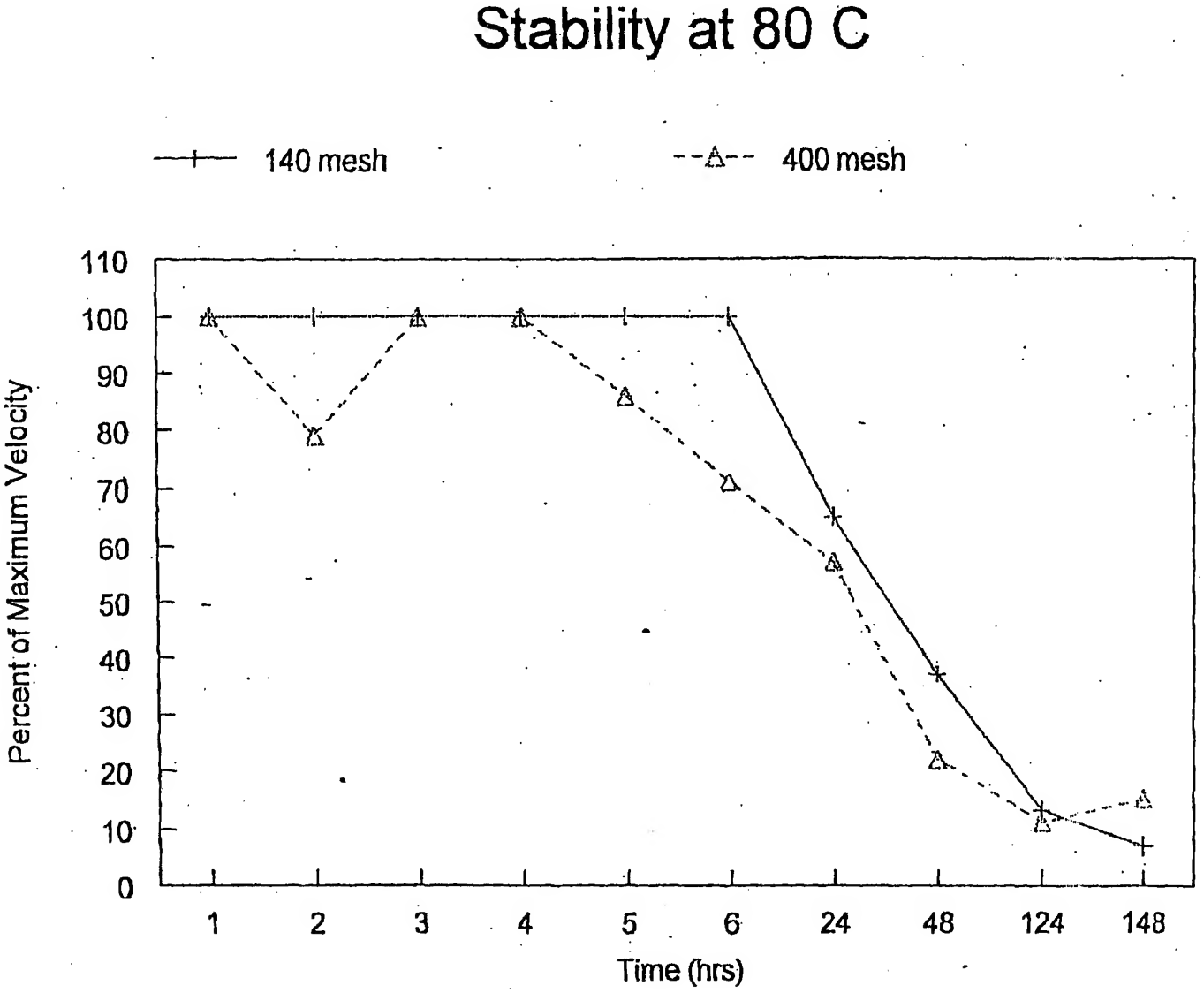
2.10
1.40
0.70
0.00
Average Rate/mg
0
60
120
180
240
300
345
Time (minutes)

FIGURE 7


Stability at 80 C
140 mesh
400 mesh
Percent of Maximum Velocity
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100
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80
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60
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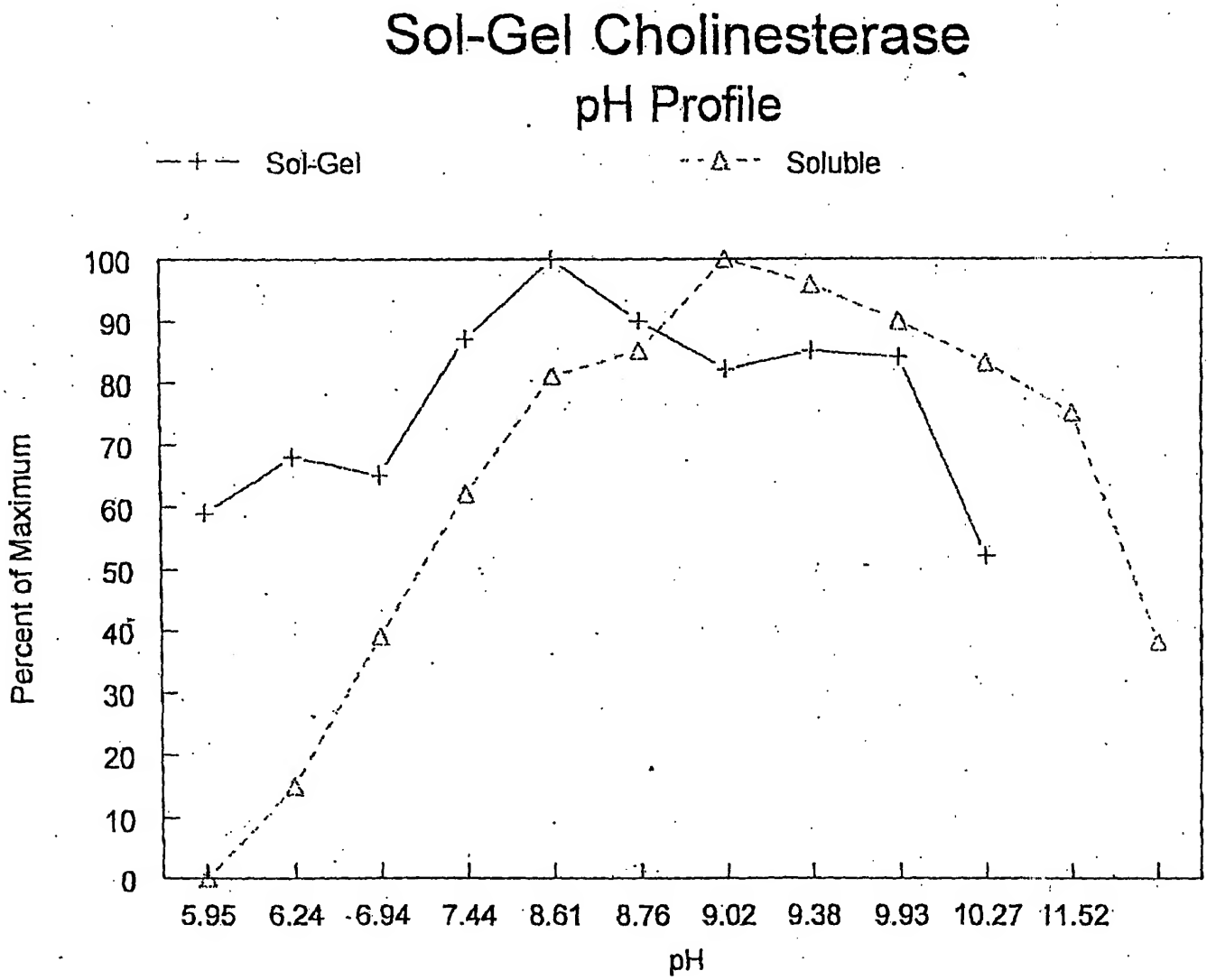
40
30
20
10
0
1
2
3
4
5
6
24
48
124
148
Time (hrs)

FIGURE 8


Sol-Gel Cholinesterase
pH Profile
Sol-Gel
Soluble
Percent of Maximum
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60
50
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30
20
10
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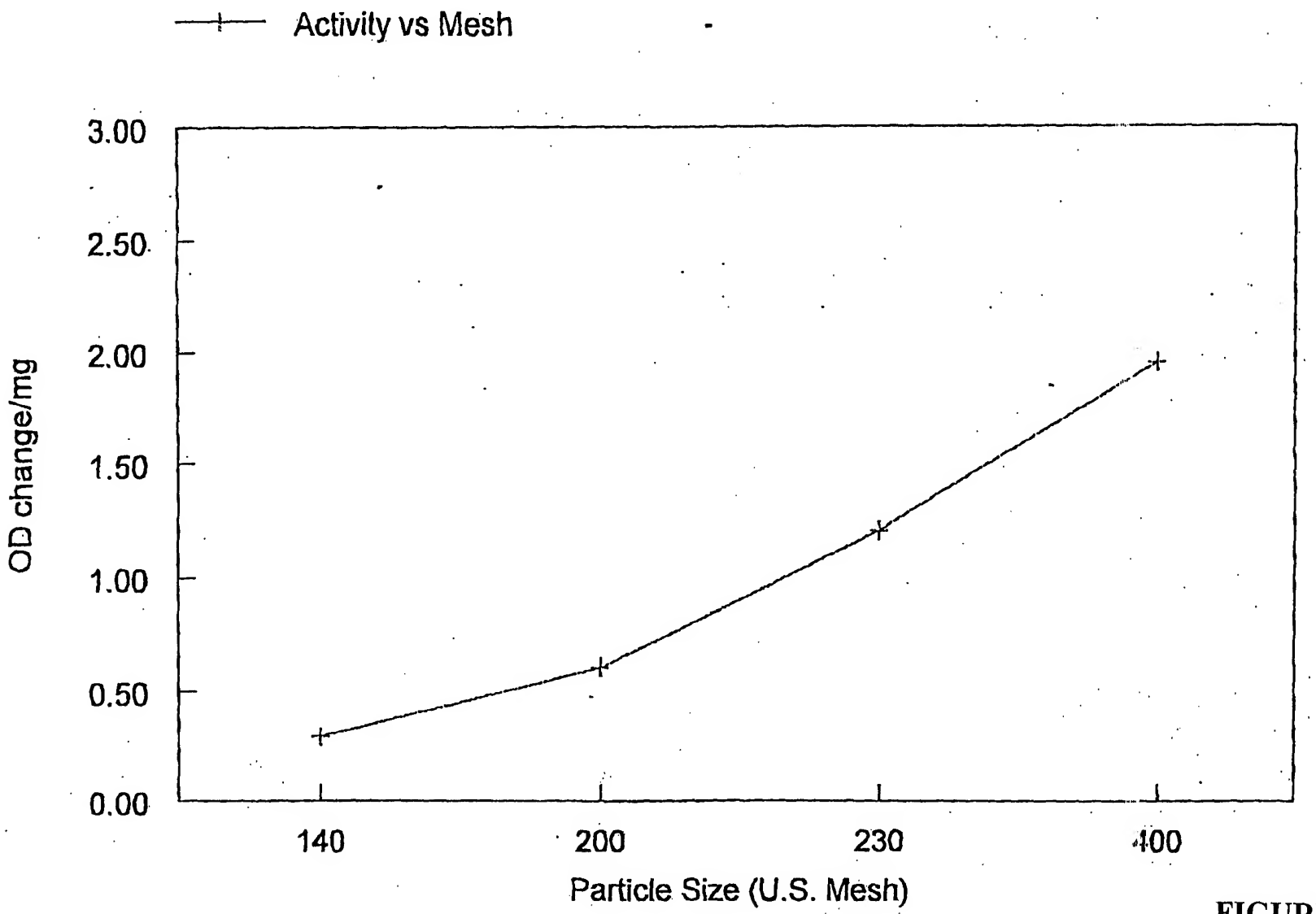
6.24
6.94
7.44
8.61
8.76
9.02
9.38
9.93
10.27
11.52
pH

FIGURE 9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2.00
1.50
1.00
0.50
0.00
OD change/mg
140
200
230
400
Particle Size (U.S. Mesh)

FIGURE 10